

### REMARKS

Applicants appreciate the thorough examination of the present application as evidenced by the final Office Action of July 11, 2007 (hereinafter "Office Action"). Applicants further appreciate the courtesies extended by Examiner Keefer to the undersigned during the telephone interviews of September 16, 2008 and September 24, 2008.

During the interviews, the outstanding rejections of Claims 31-40 under 35 USC §101 and the outstanding rejections of Claims 1-40 under 35 USC §103 were discussed. With regard to the Section 101 rejections, agreement was reached that pending Claims 31-40 would be directed to statutory subject matter if the specification were amended to define a "computer memory medium" as a separate category of computer readable medium that includes only statutory subject matter, and if Claims 31-40 were amended to recite such a "computer memory medium" rather than the currently recited "computer readable medium." With regard to the Section 103 rejections, agreement was initially reached that the pending claims would be patentable over the art of record ('DSL Evolution-Architecture Requirements for the Support of QoS-Enabled IP Services,' DSL Forum, December 2002 ("DSL Forum") in view of U.S. Patent Application Publication No. 2001/0049790 to Faccin et al. ("Faccin"); also U.S. Patent 6,876,668 to Chawla et al. ("Chawla") in view of the admitted prior art ("AAPA") and Faccin) if independent Claims 1, 11, 21, and 31 were amended as discussed during the interview of September 16, 2008. However, after further discussion and review during the interview of September 24, 2008, no agreement regarding the patentability of the pending claims was reached. Applicants respectfully submit that the above constitutes a complete interview summary pursuant to MPEP §713.04.

Accordingly, in response to the Section 101 rejections, Applicants have amended the specification at Page 8 to recite that the computer-usable or computer-readable medium described therein may include "an electronic, magnetic, optical, electromagnetic, or semiconductor computer memory medium, such as a random access memory (RAM), a read-only memory (ROM), an erasable programmable read-only memory (EPROM or Flash memory), and a portable compact disc read-only memory (CD-ROM)" (*emphasis added*), as discussed during the interviews. Applicants have likewise amended Claim 31 to recite that

the computer program product recited therein is embodied in such a "computer memory medium," which includes only statutory subject matter. No new matter has been added. Thus, Applicants submit that amended Claim 31 and the claims dependent therefrom are directed to statutory subject matter, and thus, respectfully request withdrawal of the rejections under 35 USC §101 for at least these reasons.

In response to the Section 103 rejections, Applicants have amended independent Claims 1, 11, 21, and 31 as indicated above to clarify the recitations thereof. Amended Claim 1, for example, recites, in part:

**receiving at the ANI protocol handler, a modify QoS and/or bandwidth allocation message** from the NSP and/or ASP, wherein the message comprises an application layer message **including updated QoS and/or bandwidth information for one of a plurality of application flows**, wherein the plurality of application flows respectively comprise a set of data packets associated with respective ones of a plurality of different applications provided via the access session, and wherein at least two of the plurality of application flows have a different QoS and/or bandwidth allocation;

**forwarding the modify QoS and/or bandwidth allocation message** from the ANI protocol handler **to the DSL Service Manager;**  
**updating, by the DSL Service Manager, the BRAS** with the updated QoS and/or bandwidth information included in the modify QoS and/or bandwidth allocation message, **wherein the BRAS is configured to manage QoS and/or bandwidth for individual ones of the plurality of application flows;** and

**sending the updated QoS and/or bandwidth information** included in the modify QoS and/or bandwidth allocation message from the DSL Service Manager **to the RG via the UNI protocol handler.**  
(*Emphasis added*).

Dependent Claims 2, 4, 5, 12, 14, 15, 22, 24, 25, 32, 34, and 35 have also been amended as indicated above to be consistent with the amendments to the independent claims. Support for these amendments can be found, for example, at Page 12, lines 20-22, Page 13, lines 37-39, Page 17, lines 12-14, and Figure 16 of the present application. No new matter has been added.

Applicants respectfully submit that the cited references fail to disclose or suggest at least the above portions of amended Claim 1. For example, with respect to the rejections

based on the combination of Chawla, the AAPA, and Faccin, while Chawla may describe dynamically adjusting an amount of bandwidth reserved for a session/stream of data communication, Chawla does not disclose or suggest updating a BRAS, as recited in Claim 1, with updated QoS and/or bandwidth information to provide policy enforcement *for multiple network elements*. Rather, Chawla describes evaluation of a bandwidth reservation request *at each node in the network*. See, for example, Chawla, Col. 2, lines 40-46. In particular, as described in Chawla:

[E]ach data communication device 201 contains a bandwidth reservation processor 500...[i]f the bandwidth reservation processor 500 determines that a requesting application or host (e.g., receiving hosts 210-A2 or 210-A3) has permission or privileges to reserve the requested bandwidth...the bandwidth reservation processor 500 in each data communications device 201-B through 201-E grants the request and establishes the 100 Kbps bandwidth reservation.

Chawla, Col. 12, line 39 to Col. 13, line 2 (*emphasis added*).

In contrast, in some embodiments, "[n]etwork resources are typically not reserved..." Specification, Page 19, line 24 (*emphasis added*). Rather, "[t]he approach to establishing QoS and bandwidth requirements in the network is one of provisioning rather than signaling. The BRAS and RG will be provisioned with the classifiers to identify flows and queue them appropriately. As a result the services that this model supports are services that fit more into a subscription model rather than an instantaneous establishment of service and QoS." Specification, Page 20, lines 32-36 (*emphasis added*). More particularly, the specification notes that "[t]he BRAS polices individual sessions/flows...and also performs the dynamic changes when bandwidth-on-demand services are applied." Specification, Page 17, lines 12-14 (*emphasis added*). See also Specification, Page 16, lines 21-29. The specification further notes that "[r]ate limits are also applied at the RG and BRAS so that no single application can consume all the subscriber's DSL resources." Specification, Page 18, lines 18-20.

Accordingly, as Chawla describes granting a bandwidth reservation request at each of the communications devices 201 in the network 200, Applicants submit that Chawla does not disclose or suggest updating a BRAS with updated bandwidth and/or QoS information, "wherein the BRAS is configured to manage QoS and/or bandwidth for individual ones of the

plurality of application flows," as recited by amended Claim 1, and indeed, teaches away from these recitations. *See also* Chawla, Fig. 3.

Nor does Chawla disclose or suggest that each session/stream of data includes "a plurality of application flows" having different QoS and/or bandwidth allocations, as recited by amended Claim 1. Indeed, the cited portions of Chawla do not specifically define what constitutes the "streams," "sessions," and/or "flows" described therein, but rather, appears to use these terms interchangeably. *See*, for example, Chawla, Col. 12, lines 24-38. Thus, while Chawla may disclose adjusting bandwidth for a particular session/stream/flow of data packets, Chawla does not appear to specifically disclose or suggest one access session that includes a plurality of different application flows respectively comprising "a set of data packets associated with respective ones of a plurality of different applications" provided via the same access session between a CPN and an ASP/NSP, as recited by amended Claim 1.

Also, the cited portions of Chawla do not disclose or suggest the specific implementation for modifying QoS and/or bandwidth allocation as recited by amended Claim, 1, that is, by receiving a modify QoS and/or bandwidth allocation message at the ANI protocol handler, forwarding the message to the DSL Service Manager, and updating the BRAS and RG with the updated QoS and/or bandwidth information included in the message. *See*, for example, Chawla, Fig. 3. Nor does the Office Action rely on the cited portions of the AAPA and/or Faccin as disclosing or suggesting the above-described recitations of amended Claim 1.

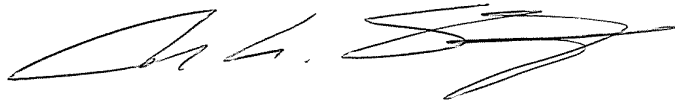
Likewise, with respect to the rejections based on the combination of DSL Forum and Faccin, while DSL Forum may disclose the general concept of different QoS treatment for different applications, the cited portions of DSL Forum do not disclose or suggest the specific implementation recited by Claim 1, where a modify QoS and/or bandwidth allocation message is received at the ANI protocol handler from the NSP and/or ASP, forwarded to the DSL Service Manager, and used to update the BRAS and the RG with the updated bandwidth and/or QoS information included therein. *See*, for example, DSL Forum, Page 30, Section 5.3.2. Nor does the Office Action rely on the cited portions of Faccin as disclosing or suggesting these recitations.

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Thus, Applicants submit that amended Claims 1, 11, 21, 31, and the claims dependent therefrom are patentable over the cited art for at least the above reasons. Applicants therefore respectfully request withdrawal of the rejections under 35 USC §103 for at least these reasons.

Based on the above amendments and remarks, Applicants submit that Claims 1-2, 4-12, 14-22, 24-32, and 34-40 are now in condition for allowance. Thus, Applicants respectfully request allowance of these claims and passing the application to issue. Applicants encourage the Examiner to contact the undersigned to resolve any remaining issues.

Respectfully submitted,

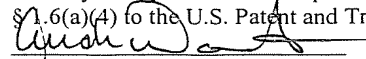


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